

WHAT IS CLAIMED IS:

1. A method for identifying a media file, the method comprising:  
searching a collection of machine readable data to locate an unknown media file therein;  
generating a media file identifier for an unknown media file located in the collection of machine readable data;  
determining an address of the unknown media file in the collection of machine readable data;  
storing the media file identifier for the unknown media file in a database;  
storing the address of the unknown media file in a database;  
associating the stored address of the unknown media file with the stored media file identifier for the unknown media file.
  
2. A method for identifying a media file as defined in claim 1, wherein the machine readable data resides on a computer network.
  
3. A method for identifying a media file as defined in claim 2, wherein the computer network includes the Internet.
  
4. A method for identifying a media file as defined in claim 3, wherein the searching is accomplished by a crawler.
  
5. A method for identifying a media file as defined in claim 4, wherein the crawler is capable of searching a network site based on an address for the network site provided by an administrator.
  
6. A method for identifying a media file as defined in claim 5, wherein the crawler is further capable of analyzing the machine readable data residing on the network site to generate an address of another network site to be searched.
  
7. A method for identifying a media file as defined in claim 6, wherein the generating of the media file identifier for the unknown media file utilizing the identifier

generating algorithm is accomplished by downloading the unknown media file and then analyzing the unknown media file with the identifier generating algorithm.

8. A method for identifying a media file as defined in claim 6, wherein the unknown media file is a streaming media file and wherein the generating of the media file identifier for the unknown media file utilizing the identifier generating algorithm is accomplished by playing the unknown media file as a stream of data and analyzing the stream of media data with the identifier generating algorithm as the stream is received by the crawler.

9. A method for identifying a media file as defined in claim 1, wherein the unknown media file is an audio file and wherein the identifier generating algorithm is an up-down coding algorithm.

10. A method for identifying a media file as defined in claim 1, wherein the unknown media file is a video file and wherein the identifier generating algorithm is a word count algorithm.

11. A method for identifying media file as defined in claim 1, wherein the generating of the media file identifier for the unknown media file is accomplished utilizing an identifier generating algorithm, the method further comprising providing a query media file, generating a media file identifier for the query media file utilizing the identifier generating algorithm, comparing the media file identifier for the query file with the media file identifier for the unknown media file in order to determine if the respective media files from which the query media file identifier and the unknown media file identifier were generated have identical media content, and providing the location of the unknown media file in response to a determination that the query media file identifier and the unknown media file identifier were generated from media files having identical media content.

12. A method for identifying a media file as defined in claim 11, further comprising providing metadata that includes information sufficient to identify the unknown media file, storing the metadata in a database and associating the metadata with the unknown media file.

13. A method for identifying a media file as defined in claim 1, further comprising providing a media file identifier for a known media file and comparing the media file identifier for the unknown media file with the media file identifier for the known media file in order to determine if the respective media files from which the known media file identifier and the unknown media file identifier were generated have identical media content.

14. A method for identifying a media file as defined in claim 13, wherein the machine readable data resides on a computer network.

15. A method for identifying a media file as defined in claim 14, wherein the generating of a media file identifier for an unknown media file is accomplished by analyzing the unknown media file with an identifier generating algorithm and wherein the providing a media file identifier for a known media file is accomplished by analyzing the known media file with the identifier generating algorithm.

16. A method for identifying a media file as defined in claim 15, wherein the unknown media file is an audio file and wherein the identifier generating algorithm is an up-down coding algorithm.

17. A method for identifying a media file as defined in claim 15, wherein the unknown media file is a video file and wherein the identifier generating algorithm is a word count algorithm.

18. A method for identifying a media file as defined in claim 1, further including, prior to the searching the collection of machine readable data, generating a media file identifier for a known media file and storing the media file identifier for the known media file in a database and further including, after the associating, comparing the media file identifier for the unknown media file with the media file identifier for unknown media file in order to determine if the respective media files from which the known media file identifier and the unknown media file identifier were generated have identical media content.

19. A method for identifying a media file as defined in claim 18, further comprising providing metadata that includes information sufficient to identify the known

media file, storing the metadata in a database and associating the metadata with the known media file.

20. A method for identifying a media file as defined in claim 19, wherein the searching is accomplished by a crawler.

21. A method for identifying a media file as defined in claim 20, wherein the crawler is capable of searching a network site based on an address for the network site provided by an administrator.

22. A method for identifying a media file as defined in claim 21, wherein the crawler is further capable of analyzing the machine readable data residing on the network site to generate an address of another network site to be searched.

23. A method for identifying a media file as defined in claim 22, wherein the generating of the media file identifier for the unknown media file utilizing the identifier generating algorithm is accomplished by downloading the unknown media file and then analyzing the unknown media file with the identifier generating algorithm.

24. A method for identifying a media file as defined in claim 22, wherein the unknown media file is a streaming media file and wherein the generating of the media file identifier for the unknown media file utilizing the identifier generating algorithm is accomplished by playing the unknown media file as a stream and analyzing the stream of media data with the identifier generating algorithm as the stream is received by the crawler.

25. A method for identifying a media file as defined in claim 22, wherein the crawler is implemented by a plurality of computers distributed throughout the computer network and wherein the searching is accomplished by the plurality of computers searching the network site simultaneously.

26. A method for identifying a media file as defined in claim 25, wherein the crawler controls the plurality of computers so as to mimic the behavior of a human user searching the network site.

27. A method for identifying a media file resident on a network, the method comprising:

creating a media file identifier by analyzing a known media file using an identifier generating algorithm;

storing the known media file identifier in a database;

creating a media file identifier for an unknown media file with the identifier generating algorithm; and

comparing the media file identifier for the unknown media file with known media file identifier in order to determine if the respective media files from which the unknown media file identifier and the known media file identifier were generated include identical media content.

28. The method of claim 27, further comprising:

storing in the database metadata for the known media file, the metadata providing information sufficient to identify the known media file for which it is stored;

associating the metadata for the known media file with the known media file identifier so that the identity of the unknown media file can be determined in the event that unknown media file and the known media file are determined to have been generated from media files having identical media content.

29. The method of claim 28, wherein:

the unknown media file and the known media file are video files;

each media file contains computer readable code encoding a series of images;

the images in each the series in each the media file are encoded as a plurality of words;

the creating the known media file identifier comprises counting the words used to encode selected images of the known video file;

the creating a media file identifier for the unknown media file comprises counting the words used to encode selected images thereof; and

the comparing comprises comparing the number of words used to encode the selected images of the known media file with the number of words used to encode the selected images of the unknown media file.

30. The method of claim 29, wherein the images in each the series of images are encoded as a GOP.

31. The method of claim 29, wherein the creating a media file identifier for an unknown media file comprises sequentially generating word counts for selected successive images in the unknown media file, and the comparing comprises comparing the word counts of images of the unknown media file as they are generated with the word counts of corresponding images of the known media files; and terminating the generating and the comparing if a sufficiently close match is found, or when the word count of each unknown image in the sequence of unknown images has been compared.

32. The method of claim 28 wherein the unknown media file and each known media file is an audio file.

33. The method of claim 32 wherein the content of each audio file includes an encoded audio signal, and the identifier generating algorithm is an up-down coding algorithm.

34. The method of claim 33 wherein the up-down coding algorithm is used on the entire audio file.

35. The method of claim 33 wherein the up-down coding algorithm is used on only a portion of the audio file.

36. The method of claim 31 wherein the network is the Internet and further comprising accessing the unknown media file via the Internet.

37. The method of claim 36 wherein the accessing is performed in a coordinated manner by a crawler from a plurality of web addresses.

38. An apparatus for identifying a media file residing on a network, the apparatus comprising:

at least one module configured to create a plurality of known media file identifiers, each for a respective one of a plurality of known media files, using an identifier generating algorithm;

a database configured to store the known media file identifiers;

at least one module configured to create a media file identifier for an unknown media file with the identifier generating algorithm; and

at least one module configured to compare the media file identifier for the unknown media file with known media file identifiers to determine if the respective media files from which the known media file identifier and the unknown media file identifier were generated have identical media content.

39. An apparatus as defined in claim 38, wherein the database is also configured to store metadata for each known media file in association with the corresponding known media file and known media file identifier located in the database.

40. An apparatus as defined in claim 39, wherein the unknown media file and each known media file are video files, each media file containing computer readable code encoding a series of images including a plurality of words; wherein the apparatus further includes at least one module configured to create known media file identifiers by counting the words used to encode selected images of each known video file, wherein the apparatus further includes at least one module configured to create a media file identifier for an unknown media file by counting the words used to encode selected images thereof, and

wherein the at least one module for comparing is configured to compare the number of words used to encode selected images of each known media file with the number of words used to encode selected images of the unknown media file.

41. An apparatus as defined in claim 40, wherein the images in each the series of images are encoded as a GOP.

42. An apparatus as defined in claim 40, wherein the at least one module configured to create a media file identifier for an unknown media file includes at least one module for sequentially generating word counts for successive images in the unknown media file,

wherein the at least one module configured to create media file identifiers for a known media file includes at least one module configured to generate word counts for successive images in each known media file and the at least one module configured to compare includes at least one module configured to compare each unknown image identifier to corresponding image identifiers for the known media files as they are generated, and wherein the apparatus further includes at least one module configured to terminate the at least one module configured to generate and the at least one module configured to compare when at least one sufficiently close match is found, or when the each unknown image identifier in the sequence of unknown image identifiers has been compared.

43. An apparatus as defined in claim 39 wherein the unknown media file and each known media file is an audio file.

44. An apparatus as defined in claim 43 wherein the content of each audio file includes an audio signal, and the identifier generating algorithm is an up-down coding algorithm.

45. An apparatus as defined in claim 44 wherein the up-down coding algorithm is used on the entire audio file.

46. An apparatus as defined in claim 44 wherein the up-down coding algorithm is used on only a portion of the audio file.

47. An apparatus as defined in claim 38 wherein the network is the Internet and further comprising accessing the unknown media file via the Internet.

48. An apparatus as defined in claim 47 wherein the means for accessing the Internet comprises at least one module configured to access the Internet in a coordinated manner from a plurality of web addresses.